

TE (EXTC) ✓

17/5/13

Microprocessor & Microcontroller I

47: 1ST HALF-13 (r)-JP

Con. 6963-13.

GS-8901

(3 Hours)

[Total Marks : 100

N.B. (1) Question No. 1 is compulsory.

(2) Answer any four questions from the remaining six questions.

1. (a) Explain difference between microprocessor and microcontroller. 5
(b) Interface 32 KB SRAM using 8 K × 8 devices and 64 KB EPROM using 16 K × 8 devices for 8085 based microprocessor system. 15
2. (a) Draw and explain architecture of 8085 microprocessor. 10
(b) Write a program for 8085 microprocessor to exchange memory block. 10
3. (a) Draw and explain interrupt acknowledge machine cycle for 8085 microprocessor. 10
(b) Explain Bit level instructions for 8051 microcontroller. 10
4. (a) Explain ICW and OCW of 8259 PIC. 10
(b) Explain serial data transfer modes for 8051 microcontroller. 10
5. (a) Explain internal memory organization of 8051 microcontroller. 10
(b) Write assembly level program for 8051 microcontroller to generate 1 KHz square wave on P 1.1. Assume crystal frequency is 12 MHz. 10
6. (a) Draw and explain interrupt structure of 8085 microprocessor. 10
(b) Explain following instructions of ARM : 10
 - (i) ADD R₀, R₁, R₂
 - (ii) SBC R₀, R₁, R₂
 - (iii) CMP R₀, R₁
 - (iv) MUL R₃, R₂, R₁
 - (v) MLA R₄, R₃, R₇, R₈
7. (a) Explain control word of 8253 Timer. 5
(b) Compare features of 89C51, 89C52, 89C2051, 89C2052. 10
(c) Draw and explain interfacing of stepper with 8051 microcontroller. 5